

Message

**From:** Hough, Palmer [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=51CD0B0D81AC416FA265944D6E6575CE-PHOUGH]  
**Sent:** 9/4/2013 5:15:52 PM  
**To:** Daniel Schindler [deschind@uw.edu]  
**Subject:** RE: Questions regarding EPA citations to Schindler, 2010

Dan:

Thanks. This is very helpful. One question. In the following two sentences from page one of your reply, I assume you meant to say "unlikely" in the first sentence rather than "likely". Is that correct?

"First, given the genetic structure of salmon stocks, it is very likely that 'new' habitat that is created will be colonized and used by a new genetic strain of fish. Instead, strays from an existing population are most like to use any 'new' habitat (assuming they can create it)."

-Palmer

---

Palmer Hough, Environmental Scientist  
office: 202.566.1374 | mobile: 202.657.3114

Wetlands Division  
U.S. EPA Headquarters (MC 4502T)  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460  
[www.epa.gov/wetlands](http://www.epa.gov/wetlands)

**From:** Daniel Schindler [mailto:deschind@uw.edu]  
**Sent:** Wednesday, September 04, 2013 12:48 PM  
**To:** Hough, Palmer  
**Subject:** Re: Questions regarding EPA citations to Schindler, 2010

Palmer,

Here are some quick responses to your questions. They are not particularly well wordsmith'd so please let me know if you need more explanation. If you want to touch base via phone we could set up a call as well. I'm still in the field for a couple more weeks but we could figure out how to connect via sat phone or skype. None of their criticisms hold any water.

I have also attached a paper that a few of us wrote that describes how salmon respond to climate change. It has an interesting story in it about how changes in habitat quality for salmon can be masked by changes in the environment (the section on OR coho lays this out. See also Lawson 1993 paper that is cited in this paper)

Daniel

On Thu, Aug 15, 2013 at 1:44 PM, Hough, Palmer <[Hough.Palmer@epa.gov](mailto:Hough.Palmer@epa.gov)> wrote:

Dan:

I hope you are well. I appreciated your coming in to meet with folks here at EPA HQ earlier this year regarding our Bristol Bay Assessment (BBA). We are currently reviewing the over 885,000 public comments we received on the April 2013 revised draft BBA. Among these comments is a report prepared for the Pebble Limited Partnership by the HDR consulting firm. Among other things, the HDR report questions our citation to your 2010 publication

(Schindler, D.E., R. Hilborn, B. Chasco, C.P. Boatright, T.P. Quinn, L.A. Rogers, and M.S. Webster. 2010. Population diversity and the portfolio effect in an exploited species. *Nature* 465: 609-612.).

The attached word file has the two excerpts from Appendix J of the April 2013 BBA that refer to Schindler 2010 and that HDR calls into question. This word file also includes HDR's specific comments regarding these two excerpts. I would appreciate your thoughts regarding whether or not you think these citations by EPA to your 2010 publication are appropriate. I have also attached a complete copy of Appendix J of the April 2013 BBA as well as a copy of the complete report prepared by HDR for the Pebble Limited Partnership in case you would like to see either of these.

Thank you for any insights you can share regarding this issue and please do not hesitate to contact me if you have any questions.

Thanks, Palmer

---

Palmer Hough, Environmental Scientist  
office: 202.566.1374 | mobile: 202.657.3114

Wetlands Division  
U.S. EPA Headquarters (MC 4502T)  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460  
[www.epa.gov/wetlands](http://www.epa.gov/wetlands)